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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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NEW YORK, NY 10151

EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 05/08/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/500,356

Applicant(s)

KONDO ET AL.

Examiner

DANIEL G MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/500,356.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 6-7, 10-12, 16-17 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Mine, et al. (6,154,566).

With regard to claim 1, Mine, et al. discloses a data processing apparatus for processing input data, i.e., image, and outputting the processed data as output data (See for example, Figs. 1 and 2), comprising: extraction means, i.e., similarity unit, for extracting from the input data, i.e., inputted image, similar input data having a value close to a value of given input data, i.e., model image data, and processing means for processing the input data according to the similar input data extracted by said extraction means (See for example, Figs. 2; and col. 5, line 56 through col. 6, line 40).

With regard to claim 2, a data processing apparatus according to claim 1, wherein said extraction means extracts the similar input data by applying a weight to the input data according to a difference between the input data and the given input data (see for example, items 19 & 20, in Fig. 2).

With regard to claim 3, a data processing apparatus according to claim 2, wherein said extraction means applies a weight to the input data by multiplying the input data with a predetermined weight function (which reads on col. 6, lines 41-59).

With regard to claim 6, a data processing apparatus according to claim 1, wherein said processing means calculates the output data by adding the similar input data which are weighted according to temporal or spatial proximity between the similar input data and the given input data (See for example, col. 9, lines 23-50).

With regard to claim 7, a data processing apparatus according to claim 6, wherein said processing means applies a weight to the similar input data by multiplying the similar input data with a predetermined weight function (which reads on col. 9, line 65 – col. 10, line 15).

With regard to claim 10, a data processing apparatus according to claim 1, wherein said extraction means extracts the similar input data from the input data based on a difference between the input data and the given input data (See for example, item 20, in Fig. 2).

With regard to claim 11, a data processing apparatus according to claim 1, wherein said extraction means extracts input data which is temporally or spatially close to the given input data as the similar input data (See for example, col. 9, lines 23-50).

With regard to claim 12, a data processing apparatus according to claim 1, wherein said extraction means extracts input data, as the similar input data, whose difference from the given input data is within a predetermined value (See for example, item 20, in Fig. 2; and Fig. 6F).

With regard to claim 16, a data processing apparatus according to claim 1, wherein said processing means calculates the output data by performing approximate processing using the similar input data (which reads on col. 6, line 29 – col. 7, line 53).

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With regard to claim 17, a data processing apparatus according to claim 16, wherein said processing means performs the approximate processing according to a predetermined model, i.e., model image (See for example, Figs. 3 and 6).

Claim 19 is rejected the same as claim 1 except claim 19 is a method claim. Thus, argument analogous to that presented above for claim 1 is applicable to claim 19.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Li, et al. (5,602,934).

With regard to claim 1, Li, et al. discloses a data processing apparatus for processing input data and outputting the processed data as output data (See for example, Fig. 1), comprising: extraction means, i.e., item 30, in Fig. 1, for extracting from the input data, i.e., sub-images, similar input data having a value close (i.e., calculation of the differences of the sub-images inherently provides the closeness between the two. For example, by computing the minimum difference) to a value of given input data, i.e., original or given image, and processing means for processing the input data according to the similar input data extracted by said extraction means (See for example, col. 7, lines 4-65; and Fig. 5).

With regard to claim 2, a data processing apparatus according to claim 1, wherein said extraction means extracts the similar input data by applying a weight to the input data according

to a difference between the input data and the given input data (see for example, col. 7, lines 22-50).

With regard to claim 3, a data processing apparatus according to claim 2, wherein said extraction means applies a weight to the input data by multiplying the input data with a predetermined weight function (See for example, col. 7, lines 43 –60).

With regard to claim 4, a data processing apparatus according to claim 3, further comprising setting means for adaptively setting the weight function (See for example, col. 8, lines 46-52; and item 28, in Fig. 1).

With regard to claim 5, a data processing apparatus according to claim 4, further comprising estimation means for estimating a level of noise contained in the input data, wherein said setting means sets the weight function according to the estimated level of noise (which reads on col. 8, lines 49-52), for example.

With regard to claim 6, a data processing apparatus according to claim 1, wherein said processing means calculates the output data by adding the similar input data which are weighted according to temporal or spatial proximity between the similar input data and the given input data (See for example, col. 7, lines 36-53).

With regard to claim 7, a data processing apparatus according to claim 6, wherein said processing means applies a weight to the similar input data by multiplying the similar input data with a predetermined weight function (See for example, col. 7, lines 43 –60).

With regard to claim 8, a data processing apparatus according to claim 7, further comprising setting means for adaptively setting the weight function (See for example, col. 8, lines 46-52; and item 28, in Fig. 1).

With regard to claim 9, a data processing apparatus according to claim 8, further comprising estimation means for estimating a level of noise contained in the input data, wherein said setting means sets the weight function according to the estimated level of noise (which reads on col. 8, lines 49-52), for example.

With regard to claim 10, a data processing apparatus according to claim 1, wherein said extraction means extracts the similar input data from the input data based on a difference between the input data and the given input data (See for example, item 506, in Fig. 5).

With regard to claim 11, a data processing apparatus according to claim 1, wherein said extraction means extracts input data which is temporally or spatially close to the given input data as the similar input data (See for example, col. 7, lines 36-53).

With regard to claim 12, a data processing apparatus according to claim 1, wherein said extraction means extracts input data, as the similar input data, whose difference from the given input data is within a predetermined value (See for example, col. 7, lines 54-58).

With regard to claim 13, a data processing apparatus according to claim 12, further comprising setting means for adaptively setting the predetermined value (See for example, col. 8, lines 46-52; and item 28, in Fig. 1).

With regard to claim 14, a data processing apparatus according to claim 13, further comprising estimation means for estimating a level of noise contained in the input data, wherein said setting means sets the predetermined value according to the estimated level of noise (which reads on col. 8, lines 49-52), for example.

With regard to claim 15, a data processing apparatus according to claim 14, wherein said estimation means estimates the level of noise based on a difference between the input data and

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the corresponding output data or based on a variance of the input data (See for example, items 506-518, in Fig. 5).

With regard to claim 16, a data processing apparatus according to claim 1, wherein said processing means calculates the output data by performing approximate processing using the similar input data (See for example, col. 7, lines 12-35).

With regard to claim 17, a data processing apparatus according to claim 16, wherein said processing means performs the approximate processing according to a predetermined model, i.e., given image or original image (See for example, col. 7, lines 23-29).

With regard to claim 18, a data processing apparatus according to claim 17, wherein said processing means performs the approximate processing according to a model represented by a linear expression (col. 9, lines 9-12).

Claim 19 is rejected the same as claim 1 except claim 19 is a method claim. Thus, argument analogous to that presented above for claim 1 is applicable to claim 19.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 4972499, 5917940, and 6341179; and a publication to Unser, et al. "Weighted averaging of a set of noisy images for maximum signal-to-noise ratio".

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G MARIAM whose telephone number is 703-305-4010. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LEO BOUDREAU can be reached on 703-305-4607. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-746-5821 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

May 5, 2003

Daniel G. Marlam
Patent Examiner
Art Unit 2621
